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FARMERS' NEWSLETTER

Cotton



February 82/C-21

This season, U.S. cotton producers harvested their biggest crop in 28 years--an estimated 15.7 million bales. Use should rise about 700,000 bales, but not enough to prevent stocks from reaching a 13-year high of around 6 million bales on August 1. Reflecting this stock buildup, farm prices in early January averaged 50 cents a pound, down from 78 cents a year earlier.

To bring supply into better balance with demand, USDA has announced a voluntary 15-percent acreage reduction program for 1982 upland cotton.

Although the program is voluntary, producers must participate to be eligible for deficiency payments on 1982-crop cotton, and for CCC nonrecourse loans. Deficiency payments will be made if the average farm price during calendar 1982 is below 71 cents a pound--the target price. The payment rate cannot exceed the difference between the target price and the national average loan rate of 57.08 cents a pound for SLM 1-1/16 inch cotton, 3.5-4.9 micronaire.

Program Requires 15-Percent Reduction

Participants must reduce 1982 upland cotton plantings by at least 15 percent from an established cotton base, devoting the reduced acreage to conser-

vation uses. Unless your farm is following a rotation pattern, your acreage base is either your 1981 cotton acreage or the average of your 1980 and '81 acreage, whichever is greater. Your county ASCS office will establish which figure is higher for you.

Here's how the program works. A farmer with a base of 100 acres must plant no more than 85 acres of cotton for harvest. The 15-acre reduction (17.65 percent of the 85 acres permitted) must be devoted to a conservation use. If the farmer plants less than 85 acres, fewer acres have to be devoted to conservation. For example, if only 50 acres are planted, only 8.8 acres (17.65 percent of 50) have to be idled.

The land in conservation-uses must be eligible cropland, must be protected from erosion, and must not be mechanically harvested. Also, grazing won't be permitted on this acreage during the 6 main growing months.

Neither offsetting nor cross compliance is required. So, if you own or operate more than one farm, you're not required to participate on all of them to get benefits on participating farms. Also, if you produce both upland cotton and another commodity, you don't have to participate in the cotton program to qualify for benefits from the other crop program.

Combined payments from the cotton and other farm programs, except payments for disaster, are limited to \$50,000 per person per year. If your farm is large and you think your 1982-crop

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deficiency payments will exceed the limit, you may not have to put all the reduced acres in conserving uses to be eligible for program benefits. Your cotton acreage, however, cannot exceed 85 percent of the acreage base. If you think this situation fits you, see your local ASCS office.

Does It Pay To Participate?

To assess how the acreage reduction program would affect you, use the same method you've used before to decide which crops to plant--simply compare the estimated net returns from each 1982-crop alternative.

For example, what would comparative returns be for a farm with a base of 100 acres? First, assume the producer decides to participate, and that

- 85 acres are planted to upland cotton--the maximum permitted;
- expected yield is 480 pounds an acre on the 85 acres and the estimated selling price is 65 cents a pound;
- program payment yield is established by ASCS at 530 pounds an acre;
- the calendar 1982 farm price is 61 cents a pound, triggering a deficiency payment rate of 10 cents a pound;
- variable production costs for cotton are \$235 an acre;
- cover crop costs are \$35 an acre for the 15 acres in conservation use.

The participating farm's receipts may come from two sources--cash sales and deficiency payments. Costs include variable costs on land planted in cotton and cover crop costs on conserving acres. (There's no need to consider the farm's fixed costs, because they are the same regardless of whether the farm participates.) To get the net return, simply subtract expenses from receipts.

As the table on the opposite page shows (item 19), the participating farm receives \$10,750.

If the Farm Doesn't Participate . . .

Now, assume that the same producer decides not to participate. What will receipts and costs be? By not idling land, our example farmer can plant all 100 acres in cotton and earn larger receipts than by complying. Also, the producer has no cover crop costs.

However, by not participating, the producer faces some offsetting factors:

- the additional acres planted are assumed to include marginal land so average yield on 100 acres is slightly lower than the average on 85 acres; and
- the nonparticipant foregoes possible deficiency payments.

The table shows the producer's net returns when not participating are \$7,375, or \$3,375 below returns when participating. Obviously, compliance benefits this example farm when prices are low.

Of course, your expected price, costs, and yields will differ from those in the example. But, by plugging in your farm situation, you can evaluate the effects of the program on your farm.

What If Prices Improve?

In the example, the average farm price next fall is 65 cents a pound. Current low prices, combined with this 65-cent price, are assumed to trigger deficiency payments at the rate of 10 cents a pound, and the payments would make participation attractive. But, what happens if prices rise and, as a result, deficiency payments decline?

An expected price of 75 cents a pound raises returns from nonparticipation almost to the level of returns from participation--check the table again, noting the income and cost figures in parentheses. However, deficiency payments still make participation the better alternative. That's because low prices in the first part of 1982

will probably hold the calendar year average farm price below the target. So, a 10-cent rise in the expected price would reduce the deficiency payment rate, but by less than 10 cents.

A good assumption for 1982 is that a 10-cent rise in the expected price next fall would drop the deficiency payment by 5 cents.

Nevertheless, there is a price at which net returns from nonparticipation equal those from program participation. This equalizing price is important, particularly if you don't intend to use the loan program. An expected cash price below the equalizing price suggests participation is the more profitable option; an expected price above it points toward nonparticipation.

COTTON RETURNS¹

	Participant		Nonparticipant	
INCOME				
1 Acres harvested	85		100	
2 Yield/acre (lb.)	x 480		x 475	
3 Production (lb.)	40,800		47,500	
4 Average price (\$/lb.)	x 0.65	0.75	x 0.65	0.75
5 Subtotal income (\$)	26,520	(30,600)	30,895	(35,625)
6 Payment yield (lb.)	530		0	
7 Harvested acres	x 85		0	
8 Production for payment (lb.)	45,050		0	
9 Deficiency payment (\$/lb.) ²	x .10	.05	0	
10 Total payments (\$)	4,505	(2,252.50)	0	
11 Total gross income: (5+10), \$	31,025	(32,852.50)	30,875	(35,625)
EXPENSES				
12 Acres harvested	85		100	
13 Variable costs/acre (\$) ³	x 235		x 235	
14 Total variable costs (\$)	19,975	(19,975)	23,500	(23,500)
15 Reduced acres	15		0	
16 Cost/acre (\$)	x 20		0	
17 Total conservation cost (\$)	300	(300)	0	
18 Total variable costs: (14+17), \$	20,275	(20,275)	23,500	(23,500)
19 Income less variable costs: (11-18), \$	10,750	(12,577.50)	7,375	(12,125)

¹ Returns above variable costs per 100 acres of cotton base.

² Because a calendar-year price is used to compute deficiency payments, the reduction in the payment rate is assumed to be one-half the increase in the expected 1982-crop price. ³ For simplicity, ginning costs are assumed to equal cottonseed value, so neither is included in the calculations.

You can find the equalizing price by gradually changing the cash price and deficiency payment and reworking the table. But, there's a quicker method.

Let's use the data in the table for the 65-cent expected price. Then the equalizing price--call it EP--is found using the following formula:

$$EP = \$0.65 + \frac{\$10,750 - \$7,375}{47,500 + \frac{45,050 - 40,800}{2}}$$

That works out to

$$EP = \$0.65 + \frac{\$3,375}{29,225}, \text{ or } \$0.765 \text{ a pound.}$$

To identify the data in the formula, see items 3, 4, 8, and 19 in the table. Item 8, production for payment (45,050), is divided by 2 to reflect the assumption that the deficiency payment changes by half the change in expected price.

Therefore, if the grower in the example expected a price less than 76-1/2 cents a pound, participation would be more profitable. An expected price above 76-1/2 cents would make nonparticipation more profitable. To find the equalizing price for your farm, just substitute the values you've estimated for your operation in place of those in the example.

Another Key Factor--The Loan

Suppose you complete the table using data for your farm and you find the returns from nonparticipation above those from participation. Should you ignore the acreage reduction program?

The answer to the question depends on how important the loan program is to you. The table considers only cash price and deficiency payment combinations. However, the loan provides cash at harvest and allows flexibility in marketing your cotton.

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Should prices be poor in the fall--often the time of seasonal lows--the loan may let you delay your selling decision by providing cash to cover outstanding expenses. You could then benefit if prices rise later in the year.

Deficiency Payments Likely

Cotton deficiency payments are determined by comparing the target price to either the national average loan rate or the average farm price for the calendar year, whichever is higher. This differs from the payment calculations for grains, where the average farm price is determined by the first 5 months of the marketing year.

Using a calendar year farm price is particularly important in determining whether deficiency payments are made on the 1982 crop. To illustrate, say that farm prices average 55 cents a pound during January-July and marketings during that period are half the calendar 1982 total. Then, 1982-crop prices would have to average at least 87 cents during harvest (August-December) to eliminate a deficiency payment.

The graph opposite shows how farm prices for cotton have fallen since mid-1981. That sharp decline led to a cotton deficiency payment of 7.67

cents a pound on the 1981 crop. The preliminary estimate of the average price for January 1982 is 50 cents a pound, a whopping 21 cents below the target price. The graph suggests that cotton prices during 1982 will have to rise as sharply as they fell in 1981 just to equal the target price by fall. An even more stunning leap in fall prices would be required to pull the calendar year average up to the target price and prevent a deficiency payment on the 1982 crop.

UNLESS FARM PRICES SOAR, DEFICIENCY PAYMENTS ASSURED

